ABSTRACT OF THE DISCLOSURE

To provide a device capable of determining uniquely the direction of rotation applied to an image and extracting digital watermark information correctly even in the case where a registration signal having a symmetric axis is embedded. A device for enabling digital watermark information to be extracted from image data having the digital watermark information embedded therein in such a manner that it can hardly be perceived by human eyes, in which processing for extracting rotation information and position information from the image data is performed plural times for rotation angles different from one another. For extracted position and rotation information, confidence coefficients indicating accuracy thereof are calculated. The position and rotation angle at which the digital watermark information is embedded are determined based on the confidence coefficients.